

Amendments to the Specification

Please replace paragraphs 0001, 0012, 0034 and 0042 of the specification with the following amended paragraphs 0001, 0012, 0034 and 0042:

[0001] The invention relates generally to means for near real-time decision analysis support through processing large amounts of stored data for obtaining useful knowledge necessary to achieve goals of an enterprise. More particularly, the invention relates to a software solution that allows for transactional relationship analysis of over thousands of records per second for identifying obvious and non-obvious relationships between target and source database documents. Applications according to the present invention include insurance claims evaluation for detection and prevention of insurance fraud in insurance claims processing, transaction risk detection, identification and verification for use in credit card processing and airline passenger screening, records keeping verification, systems that support alias identification, identity verification, government list comparisons and various government application. Although the invention may operate in a stand-alone configuration in concert with one or more similarity search engines, it is also applicable to an enterprise level solution of large-scale workflow processes. It is particularly applicable to processes for searching, analyzing and operating on transactional and historical data found in remote and disparate databases for uncovering non-obvious or fuzzy relationships between people, places and events, and providing the results in an operational environment to other enterprise applications. For example, the present invention may be treated as a plug-in application for determining linkages between database documents in an enterprise level workflow process described in United States Patent Application No. 10/673,911, filed on September 29, 2003 Publication No. 2005/0043961 A1, published on 2/24/2005.

[0012] The automated link analysis engine sends search requests to a similarity search server, which may rely on remote similarity search agents located in multiple, remote, disparate databases to determine similarity scores between target and source documents in the remote databases. It is only necessary for the remote similarity search agents to return requested similarity scores to the similarity search server, without the need to transmit the applicable target and source documents. The requested similarity scores are then returned to the automated link analysis engine for processing. Reliance on the remote similarity search agents provides an extremely fast, near real-time processing. The similarity search server that makes use of remote similarity search agents is disclosed in United States Patent Application No. ~~10/653,690, filed on September 2, 2003~~ Publication No. 2004/0078364 A1, published on 4/22/2004 and incorporated herein by reference.

[0034] The link analysis engine 120 compares one or more input or “source” records or documents 170 against one or more “target” records or documents 180 designated in a processing profile. The records or documents 170, 180 are normally contained in one or more remote, disparate databases 150 and are compared by a similarity search server 140 and associated remote similarity search agents 160. Comparisons are at a field level, and are normally performed by the remote similarity search agents 160 using measurement and comparison functions of the similarity search server 140 with remote search agents 160, described and incorporated above. The resulting comparisons may provide a single score, a mathematically derived score, or a set of scores. High performance is one of the primary objectives of the link analysis engine. Results are provided in sub-second response times. Whether used as an analytic or as a command server, optimal performance is provided. Results from a link analysis are stored in a

local persistence database 130 and returned to the calling user interface or application 110.

[0042] The analysis section consists of the engine ~~manger~~ manager 424 and the engine core 425 sections. The engine ~~manger~~ manager 424 interfaces with and manages the engine core 425. The engine manager 424 may submit a single request to the engine core 425 or send multiple, partial requests to the engine core 425, depending on the size of the analysis and target data availability. The engine manager 424 may get blocks of target data documents from the data manager 427 as needed, or it may send query commands to a similarity search engine server 440. The engine manager 424 is responsible for building the set of results from the engine core 425, and passing them on as output to the output section 426. The engine core 425 is the component that performs the actual analysis and link detection functionality. Input to the engine core 425 is the operational directives from the processing profile, detailed source data records, and where practical, all target data records. Target data comparisons may be deferred to the data manager 427 or a similarity search engine server 440 as external query commands when very large data sets are encountered. Any interaction with the data manager 427 is provided by the engine manager 424. The engine core 425 requests additional data from the engine ~~manger~~ manager 424 as needed. Output 426 of the engine core 425 are detailed results of the analysis. The amount of detail provided is defined by the processing profile.